

ABSTRACT

A magnetic recording/reproducing apparatus is disclosed with high storage capability. The apparatus also prevents fluctuation of readback output and decay of magnetization or erasure of recorded magnetization in the recording layer. A soft magnetic underlayer and a perpendicular recording layer are formed in specific order on the substrate of a magnetic disk. The soft magnetic underlayer has a triple-layered structure in which a domain control layer, including an anti-ferromagnetic layer, is sandwiched between two first and second soft magnetic layers. The thickness of the first and second soft magnetic layers ( $d_1, d_2$ ) is between 25 nm and 150 nm and a ratio of  $d_1/d_2$  is within a range of 0.3 to 1.5. Accordingly, magnetic domains in the soft magnetic underlayer of a perpendicular magnetic recording medium can be controlled and magnetic domain wall motion can be inhibited.